The Center for Remote Sensing of Ice Sheets celebrates the

4th International Polar Year

Sea level has risen around 400 feet since the peak of the last ice age about 18,000 years ago. Sea level rise can be a product of global warming through two main processes: expansion of sea water as the oceans warm, and melting of ice over land. Global warming is predicted to cause significant rises in sea level over the course of the twenty-first century. These sea level rises could lead to difficulties for shore-based communities: for example, many major cities such as London and New Orleans already need storm-surge defenses, and would need more if sea level rose, though they also face issues such as sinking land. Current and future climate change would be expected to have a number of impacts, particularly on coastal systems. Such impacts may include increased coastal erosion, higher storm-surge flooding, inhibition of primary production processes, more extensive coastal inundation, changes in surface water quality and groundwater characteristics, increased loss of property and coastal habitats, increased flood risk and potential loss of life, loss of nonmonetary cultural resources and values, impacts on agriculture and aquaculture through decline in soil and water quality, and loss of tourism, recreation, and transportation